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May 24, 2000

VIA COURIER

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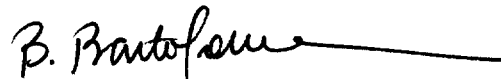
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**RE: *In the Matter of Compatibility Between Cable Systems
and Consumer Electronics Equipment,
PP Docket No. 00-67***

Dear Ms. Salas:

On behalf of the Consumer Electronics Association, I am submitting an original and nine copies of the attached "Comments of the Consumer Electronics Association" in the above-captioned proceeding. Please kindly stamp the additional copy with an FCC stamp confirming receipt. Should you have any questions about this filing, please do not hesitate to contact the undersigned.

Sincerely,



Benigno E. Bartolome

Counsel for the Consumer Electronics Association

Enclosures

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Before the
FEDERAL COMMUNICATIONS COMMISSION
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In the Matter of)
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Compatibility Between Cable)
Systems and Consumer)
Electronics Equipment)

PP Docket No. 00-67

To: The Commission

**COMMENTS OF THE
CONSUMER ELECTRONICS ASSOCIATION**

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May 24, 2000

SUMMARY

Thanks to the efforts of manufacturers, distributors and retailers, DTV is off to a strong start in the consumer marketplace. Although progress has been made and continues to be made in the discussions between the consumer electronics and cable industries, important issues remain unresolved. The Commission's Notice of Proposed Rulemaking ("NPRM") gives prominence to two major issues: product labeling and copy protection. CEA remains optimistic that the consumer electronics and cable industries will soon reach an agreement on the product labeling issue. CEA is also hopeful that the copy protection issue will result in reasonable agreements that provide the necessary protections for intellectual property while preserving the normal and customary fair use rights enjoyed by all Americans for more than twenty years. If the parties are unable to achieve resolution of these issues, CEA would welcome the Commission's intervention to achieve a fair and equitable outcome that would remove obstacles to the deployment and consumer enjoyment of DTV receivers that are fully compatible with digital cable systems. Furthermore, even if the issues laid out in the NPRM are resolved through industry agreement, continued Commission review and oversight will be necessary to facilitate resolution of a host of issues posed by the problems of cable compatibility and the successful implementation of the navigation devices rules.

Any action by the Commission on the labeling issue should be consistent with previous Commission decisions on labeling in the analog context. While many manufacturers will provide products that support IEEE-1394-based interfaces, the Commission must recognize that the functionality of such interfaces is to ensure compatibility of receivers with set-top boxes, not to ensure compatibility of receivers with cable systems. A misconception by the Commission of this very important point undermines the focus of the Commission's navigation devices rules,

which aim to liberate consumers from the necessity of operator-supplied set-top boxes to view the full range of cable programming.

Similarly, any action by the Commission on copy protection issues should be consistent with the Commission's navigation devices rules, specifically Section 76.1204(c), 47 C.F.R. § 76.1202(c), which proscribes any effort by cable operators to preclude, "by contract, agreement, patent, intellectual property right or otherwise," any equipment features that are not related to conditional access or protection against cable theft. It is CEA's position that *cable security and content copy protection are not synonymous in all aspects*, and that the Commission should act to curb overreaching efforts to force unreasonable copy protection requirements into licensing arrangements covering conditional access arrangements.

CEA and NCTA have worked in constructive partnership to resolve a number of critical compatibility issues. CEA notes, however, some remaining concerns regarding the current status of cable-consumer electronics compatibility:

- While significant progress has been made in negotiations between the cable and consumer electronics industries regarding electronic program guides ("EPGs"), there remain several issues regarding implementation of the February 22, 2000 agreement. The program guide feature planned for "cable-ready" DTV sets will not function without two additional actions. First, program producers must insert guide (Program and System Information Protocol – "PSIP") information into each program before it is delivered to cable for distribution. Second, the cable industry must implement the technical means to ensure that each program's PSIP information is delivered to the DTV set, without corruption, through any and all cable plants (*i.e.* all common or centralized programming network and distribution systems, plus each local cable system). A reliance on program producers to insert PSIP in their programs, and an assurance from cable of the integrity of such PSIP information, are provided in the February 2000, CEA-NCTA technical compatibility agreement. Therefore, to meet the earliest possible introduction date of "cable-ready" DTVs -- that is, TVs which provide consumers with a simple, seamless electronic guide listing available programs, whether they originate on cable or on broadcast. CEA urges the Commission to support and help promote industry efforts on both actions, each of which will take some time to implement reliably, even as terrestrial broadcasters and their program suppliers have been learning to do over time.

- Digital cable systems and cable programming sources must conform their closed captioning procedures with EIA-708 to ensure advanced capabilities consistent with those available through broadcast DTV. The Commission should establish a date certain, consistent with the timeline required for DTV to decode advanced captions, by which cable operators must conform to the EIA-708 standard.
- The cable industry has yet to embrace standards that will ensure nation-wide portability of cable-compatible DTV receivers and other navigation devices. Cable operators continue to allocate the bulk of their energies and resources to the deployment of proprietary features that necessitate the use of operator-specific set-top boxes, even though some new generations of proprietary boxes may include replaceable security modules and could be available for retail sale.
- The standards and other arrangements that are referenced herein are just the beginning. There will be a need to continue to define standards for future services, a process that should be undertaken in an industry standards body with open membership. In order for a retail market for compatible navigation devices to prosper, cable compatibility standards and requirements should be reviewed on a periodic basis so as to avoid any unnecessary drift toward proprietary solutions and features.
- Even with the significant agreements already in place, the requirements of Section 624A of the Communications Act will still not be easily realizable, unless transmission of over-the-air broadcasts and basic cable programming are sent “in the clear”; functionalities such as picture-in-picture, channel-shift consecutive recording, and record-while-watch will be complex and will require dual, or multiple, security interfaces.
- Cable operators have been slow to upgrade head-ends for their systems to ensure compatibility with point-of-deployment (“POD”) modular security systems; instead, they are awaiting commercial availability of POD-based navigation devices, which constitutes a “chicken and egg” situation that undermines the Commission’s efforts to promote a commercial market for fully-compatible navigation devices. It is unclear to consumer electronics manufacturers why cable head-ends need to be upgraded to support POD modules (separable security) while ongoing integrated security device deployment does not require head-end upgrades. If in fact head-end upgrades are necessary for successful POD deployment, then the Commission should require cable operators to effect such upgrades on a priority basis.
- Without the commitment to portability of navigation devices and the full support for POD deployment on the part of the cable industry, the Commission should consider moving up the phase-out date for deployment of operator-supplied navigation devices with embedded security to a date much earlier than the current requirement of January 1, 2005.

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**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
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Compatibility Between Cable)	PP Docket No. 00-67
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Electronics Equipment)	

To: The Commission

**COMMENTS OF THE
CONSUMER ELECTRONICS ASSOCIATION**

The Consumer Electronics Association (“CEA”), pursuant to Section 1.415 of the Commission’s Rules, 47 C.F.R. § 1.415, hereby respectfully submits its comments in response to the Notice of Proposed Rulemaking (“NPRM”) issued by the Commission in the above-captioned proceeding.¹

I. INTRODUCTION AND STATEMENT OF INTEREST

CEA is the principal trade association of the consumer technology industries.² CEA members design, manufacture, distribute and sell a wide variety of consumer electronics equipment and information technology equipment, including analog and digital televisions (“DTVs”), radios, computers, videocassette recorders (“VCRs”), and digital versatile disc

¹ See *In the Matter of Compatibility Between Cable Systems and Consumer Electronics Equipment*, PP Docket No. 00-67, Notice of Proposed Rulemaking, FCC 00-137 (rel. April 14, 2000) (“NPRM”).

² CEA, along with the Telecommunications Industry Alliance and several other associations, are separately incorporated sectors of the Electronics Industries Alliance.

(“DVD”) players. Because many important design features of consumer electronics devices and CEA’s efforts in developing cable compatibility standards that will directly affect these designs are the subject of the Commission’s NPRM, CEA clearly has an interest in this proceeding.³

CEA is grateful that the Commission has played an active role in serving as mediator and facilitator to assist various affected industries to resolve issues of compatibility between cable systems and consumer electronics equipment. CEA thanks the Commission for its continued diligence in encouraging a regulatory environment that will allow for a successful and consumer-friendly transition from analog television to DTV. While CEA approves of the Commission’s motivation for issuing the NPRM, CEA remains optimistic that an agreement on the remaining issues can be reached.

In the NPRM, the Commission seeks comment on rules concerning the compatibility of cable television systems, digital television receivers, set-top boxes, and other equipment used by consumers to receive and enjoy the ever-increasing array of programming and other services available over cable television systems.⁴ As the Commission correctly observes, the introduction and development of digital technology directly implicate compatibility issues, as new digital products must be made compatible with multiple forms of delivery systems that have adopted

³ The comments which follow reflect the consensus views of CEA’s member companies. Individual members, however, may hold different views on a number of issues raised by the NPRM.

⁴ *Id.* at ¶ 1. CEA notes that the *NPRM* (at ¶ 8) states that “[b]y July 1, 2000 consumers should be able to purchase at retail television sets and set-top boxes that are compatible with cable ‘security modules’ sold or leased by the cable industry.” However, there is currently no requirement that all cable-consumer electronics compatibility issues must be resolved in that time frame, such that fully cable-compatible digital television receivers or set-top boxes will be available at the same time that such security modules are required to be available.

different transmission standards as well as with existing analog technology that will remain in households and on the market for some time.⁵

Both the consumer electronics and cable industries have been engaged, for a period of several years, in negotiations that have produced consensus on a limited number of issues. Appropriately, the Commission has encouraged and facilitated these discussions, in the hope and belief that comprehensive market-driven solutions were attainable and would be superior to a regulatory approach. According to the NPRM, the Commission “reluctantly” issued a rulemaking in this area because it is concerned that “further delay in resolving these issues could begin to have deleterious effects on the deployment of a universe of products and services that will benefit the American public and . . . delay implementation of DTV.”⁶

Numerous problems remain that are not directly addressed in the NPRM. First and foremost, the goal of nation-wide portability of navigation devices, based on uniform standards for interconnectivity and interoperability, is still a distant hope. Cable operators continue not only to deploy proprietary systems requiring operator-supplied set-top boxes that are not subject to any compatibility constraints, but also to invest further in the development of such proprietary technology. Even though new generations of operator-supplied set-top boxes possess POD interfaces, those devices rely on proprietary features and systems that do not conform with OpenCable specifications. Moreover, cable operators have been slow to upgrade their head-ends for compatibility with the modular security specifications set forth by CableLab’s OpenCable project, with the result that, when POD-based host navigation devices come to market, their ability to function properly, and thus the ability to market them successfully, cannot be assured.

⁵ *Id.* at ¶ 2.

⁶ *Id.*

These trends can only be seen as an effort, whether by design or inertia, to overwhelm the Commission's navigation devices rules, in particular the phase-out of set-top boxes with embedded security, by sheer weight of deployment. To offset these trends in the cable industry, the Commission should give strong consideration to advancing the date for the phase-out of deployment of operator-supplied, integrated (*i.e.*, not possessing modular security) navigation devices from the date of January 1, 2005 set by Section 76.1204(a)(1).⁷ CEA suggests that this date could be moved up by two or three years without causing undue burdens for cable operators, but with significant benefits for the commercial market in fully-compatible receivers and other navigation devices.

Moreover, the specific functionalities mandated by the compatibility requirements of Section 624A of the Communications Act of 1934, as amended, are still problematic in today's digital cable environment.⁸ Currently, a subscriber to digital cable service would find it impossible to fully utilize the picture-in-picture, channel-shift consecutive recording, and record-while-watch functionalities of digital consumer electronics equipment without the provision of one or more operator-supplied set-top boxes. In a modular security environment, two or more PODs and complementary POD interfaces on the host devices will be necessary to effect these functions, because PODs are capable of passing only one channel at a time for display.

Even receiver-based digital closed captioning is not available to many digital cable subscribers, because of continued use by cable operators of legacy systems based on analog technology. While cable operators and programmers could adapt their closed captioning procedures to transmit information conforming to EIA-708 (the broadcasting closed captioning

⁷ See 47 C.F.R. § 76.1204(a)(1).

⁸ See 47 U.S.C. § 544a.

standard adopted by the Commission) and, at the same time, maintain their legacy systems for use with their embedded base of set-top boxes, they have been slow to do so. Cable operators should be held to the same deployment schedule as consumer electronics manufacturers and broadcasters, so that cable subscribers will not be denied the advanced capabilities of digital closed captioning.

CEA recognizes that all progress on this complex set of issues will be incremental. The NPRM that initiated this proceeding is thus an important step forward. The NPRM primarily focuses on two issues: the requirements for a DTV receiver to be labeled “cable-compatible” (specifically, whether these receivers should be required to include an IEEE 1394 connector) and licensing terms for copy protection technology. The Commission, in the NPRM, states that if the parties “reach a consensus during the pendency of this rulemaking, thus eliminating extant compatibility problems, regulation by the Commission may well become unnecessary.”⁹ CEA respectfully disagrees with this assessment as overly optimistic. As the discussion above points out, even if the issues laid out in the NPRM are resolved through industry agreement, continued Commission review and oversight will be necessary to facilitate resolution of a host of issues posed by the problems of cable compatibility and the successful implementation of the navigation devices rules. With this background, CEA submits its comments on the issues set forth in the NPRM, and other related issues, for the Commission’s consideration.

⁹ *NPRM* at ¶ 22.

II. CEA IS COMMITTED TO CONTINUING TO WORK WITH NCTA AND OTHER INDUSTRY PARTICIPANTS TO RESOLVE OUTSTANDING CABLE COMPATIBILITY ISSUES.

As the NPRM notes, many cable systems are already offering tiers of digital cable service. Incumbent television broadcasters have begun broadcasting in a digital format, and additional broadcasters will begin doing so over the next few years, in accordance with a specified timetable. Broadcasters will transmit both digital and analog signals for some period of time, after which the analog frequencies must be relinquished and the conversion to a fully digital broadcast television environment will be complete. Both during and after this transition, however, it is important for consumers that digital television receivers be able to display the digital broadcast signals (and other programming, including electronic program guides) that cable systems offer, and that consumers have a clear understanding of the capabilities of the digital television receivers that they purchase through appropriate labeling. Indeed, CEA recognizes that without resolution of outstanding compatibility issues, the transition from analog to digital broadcasting will be slowed, and the implementation of the Commission's navigation devices rules will be impeded.

As the Commission is well aware, CEA and its members have worked for well over a decade to launch DTV. Indeed, CEA members invented DTV here in the United States, and the consumer electronics industry has already invested in excess of a billion dollars in developing this technology. CEA co-founded WHD-TV, the Model HDTV Station that has been transmitting an HDTV signal for more than three years. CEA has also been a major funder and proponent of the Advanced Television Test Center ("ATTC"), and has been an active member in the Advanced Television Systems Committee ("ATSC"). After more than ten years of private research and development, CEA is pleased that digital television has been successfully launched

from the laboratory into the consumer marketplace. The DTV receivers currently on sale comply with all elements of the broadcast standard adopted by the Commission.

Initial DTV sales have been strong, and CEA expects sales to continue at a steady pace and gain increased momentum as more programming becomes available, more stations begin DTV broadcasts, and more DTV set choices are introduced.¹⁰ As a general matter, CEA believes that it is essential that no gatekeepers be allowed to deny consumers access to the full array of DTV services by restricting access to, or degrading the quality of, broadcasters' DTV signals, or by artificially limiting the functionality of the home equipment provided by consumer electronics manufacturers. CEA urges the Commission to ensure that DTV must-carry and other access concerns are considered and resolved either in this or other related proceedings.

CEA emphasizes its commitment to continue to engage in efforts to resolve cable compatibility issues that remain and notes its optimism that a resolution can be reached in the immediate future. The consumer electronics and cable industries, over several years now, have been constructively working together to complete standards that will promote compatibility between digital television receivers and digital cable services. Indeed, several agreements on a variety of issues have already been reached, and the most recent of which was announced on February 22, 2000. The agreements announced on February 22, 2000 constitute major

¹⁰ To date, manufacturers have introduced more than 165 DTV products that are being stocked by more than 270 retailers across the country. CEA reports that more than 220,000 DTV units (integrated sets, monitors, and set-top decoders/receivers) have been sold in the U.S. since the introduction of DTV in August of 1998, meeting CEA's early projections. CEA estimates that sales of DTV products to dealers should hit 425,000 units in 2000. CEA cautions, however, that sales projections are premised upon the availability of quality program content. In this regard, the consumer electronics industry has been working tirelessly with the cable industry and content providers for the past several years to reach agreement on all of the issues surrounding compatibility between consumer DTV products and digital cable systems.

accomplishments in the interoperability of cable systems and digital television sets. CEA and the National Cable Television Association (“NCTA”) exhausted tremendous efforts and resources to reach voluntary agreements because of their mutual view that a government rulemaking could not expedite, but would only slow down, the development of an end-to-end cable delivery system for consumers in the United States.

The first agreement details the technical specifications necessary for set manufacturers to build DTV receivers that will connect directly to cable systems to receive digital cable signals. The second agreement set out how the cable operator will pass Program and System Information Protocol (“PSIP”) Event Information Tables (“EIT’s”) from program services to the receivers for programming guides created by the receivers. There is no firm commitment, however, on the part of cable programmers to provide the data for the EIT’s, nor is there a firm commitment from cable operators to deliver it to the receivers. When such agreements are reached, manufacturers can proceed to build television sets that can be connected directly to cable systems and produce program guides only if the data is present in correct form.

As to the two remaining issues identified in the NPRM – *i.e.*, labeling and copy protection – CEA and NCTA are working aggressively to resolve these issues, as are other parties, such as the content provider community, whose interests are also affected. CEA remains optimistic that an agreement on the remaining issues can be reached. At the same time, CEA shares the Commission’s desire to immediately resolve outstanding issues so that any delay in the ability of consumers to enjoy the full benefits of digital television can be averted. Thus, if an agreement on the remaining issues cannot be achieved soon, CEA would support Commission efforts to facilitate a rapid resolution through an expedited rulemaking. Further, should the Commission find it necessary to adopt regulations, CEA urges the Commission to ensure that

any rules contemplate a competitive market for DTV receivers and other digital navigation devices that can provide widespread consumer choice and consumer confidence in new digital services.¹¹

III. DTV LABELING IS ESSENTIAL TO PROVIDING MANUFACTURERS AND CONSUMERS WITH UNIFORM TERMINOLOGY TO ENSURE THAT CONSUMERS CAN MAKE INFORMED DTV PURCHASING DECISIONS.

DTV labeling, indeed, is needed in order to simplify the different levels of DTV products and to provide manufacturers and consumers with uniform terminology to ensure that consumers can make informed DTV purchasing decisions. Discussions concerning labeling of cable compatibility receivers and digital cable systems are ongoing. On this issue, CEA believes that it is fundamental to give consumers the freedom to choose, and the information to make informed choices, concerning the features and functionality that they want or that meet their needs in their digital audio and video equipment. This freedom and this information are critical to market adoption of new products, the rapid nationwide transition to DTV, and the growth and viability of competitive new services made possible by DTV.

Specifically with respect to the question of labeling television receivers, the Commission appropriately acknowledges that consumer electronics manufacturers are free to build television receivers with or without 1394 connectors.¹² The Commission nonetheless asks whether a

¹¹ Indeed, Section 624A calls for minimal Commission involvement. The Telecommunications Act of 1996 amended Section 624A to include the finding that “compatibility among televisions, video cassette recorders, and cable systems can be assured with narrow technical standards that mandate a minimum degree of common design and operation, leaving all features, functions, protocols, and other product and service options for selection through open competition in the market.” 47 U.S.C. § 544a(a)(4).

¹² *NPRM* at ¶ 18.

receiver without a 1394 connector should be labeled as “cable ready.”¹³ As the Commission points out, it is the position of cable operators that the interactivity afforded by a 1394 connection will become an integral feature of cable service, and hence that no receiver that lacks such a connection should be deemed “cable ready.”¹⁴

First and most important, the Commission must understand that the presence of a 1394 interface on a receiver is not essential for interactivity or two-way cable services, although it may affect such features that are delivered via a set-top box. The interface merely provides a means, one of many possible, to connect a set-top box to the receiver and to use the receiver essentially as a monitor. In fact, any interactive features that the receiver might possess, including its navigation and remote control functions, will no longer be operative if the input is supplied through the 1394 interface. The consumer will be required to interact with the set-top box for tuning and navigation as he does now with analog set-top boxes. A decision to enshrine the 1394 interface as an essential element of a baseline “cable ready” DTV receiver would be a major mistake, because it would communicate an inaccuracy to consumers about receivers that could provide full access to cable services without such an interface, and because it will encourage cable operators to continue to pursue a digital strategy based on “captive” set-top boxes utilizing proprietary technologies rather than to pursue a collaborative course to promote full compatibility.

A. The Commission Should Afford Consumers the Choice of Selecting From Competing Interfaces.

As reflected in the NPRM, the consumer electronics and cable industries have disagreed on the issue of whether an IEEE 1394 set-top box interface should be included on a DTV set in

¹³ *Id.*

¹⁴ *Id.*

order for the set to be deemed “cable ready.”¹⁵ The consumer electronics industry developed receiver standards based on IEEE 1394, and manufacturers will produce 1394 equipped sets for consumers who want them. In CEA’s view, however, it does not make sense to include a 1394 set-top box interface on every DTV set, since more than 50% of consumers today prefer to attach their cable service directly to their set without a box. Further, such a requirement would only broaden the digital divide by forcing Americans to pay more for every DTV set to get features they may not want or use, while at the same time paying for basic features (tuning and navigation) in the receiver that they will not be able to use if connected to a set-top box. Only POD modules need to be supplied by the cable operator. CEA does not believe that any additional cable-supplied hardware is required for any current or new services, including full Electronic Program Guide (“EPG”) support.

In the NPRM, the Commission states that “cable operators generally believe that interactivity afforded by a 1394 connection will become an integral feature of cable service, and hence that no receiver that lacks such a connection should be deemed ‘cable ready.’”¹⁶ The 1394 interface, however, provides “interactivity” only because it allows the interactivity features of one device (the set-top box) to supplant those of another (the DTV receiver). Interactivity and the 1394 interface are not necessarily synonymous. All features that can be included in a set-top box can also be included in the television receiver. For example, new digital receivers with built-in DirecTV capabilities provide the same features as a DirecTV set-top box, but the integrated package is more consumer friendly -- one box, one power supply, one remote control system, etc. This is also true of two-way cable applications -- the television receiver can talk

¹⁵ *Id.*

¹⁶ *Id.*

directly to the cable system just as easily as the set-top box can. All that is required is an industry standard. The CEA R-8 Cable Compatibility Committee has begun to define the standard for a two-way "Cable Compatible" digital television receiver as the next step in the program that was agreed with NCTA.

CEA observes that the NPRM does not reflect that, in fact, there are several interface connectors available, the most important of which are the antenna terminals of the television receiver.¹⁷ IEEE 1394 is but one of a number of technical solutions to cable compatibility issues. Nevertheless, CEA and its members recognize the primacy of the 1394 interface from the cable industry perspective and have negotiated in good faith with the cable industry to seek an appropriate resolution to labeling issues involving this interface. CEA is hopeful that an agreement can be reached on these issues and announced to the Commission in the near future.

While the consumer electronics industry has devised a number of standards that will allow the connection of DTV receivers to cable set-top boxes, CEA remains committed to the goal of making the use of a set-top box to receive cable DTV video services a consumer option,

¹⁷ EIA-775A is a 1394 interface standard creates an architecture that allows digital devices such as DTV receivers, DVD players, and digital set-top boxes to be daisy-chained together. The RF Remodulator Interface (published as EIA-762) uses a one-way, point-to-point connection, this interface can translate a baseband signal, such as the cable industry's quadrature amplitude modulation ("QAM") transmission language, into vestigial sideband modulation ("VSB"), the transmission standard accepted by the Advanced Television Systems Committee ("ATSC"). The Component Video Interface (published as EIA-770A series) can link sets to cable and satellite boxes using a one-way, analog, high definition, point-to-point connection. The National Renewable Security Standard ("NRSS") Interface (published as EIA-679B) works with digital receivers and would provide smart-card and PCMCIA based access security to pay and subscription services offered over cable or terrestrial broadcast. The four interfaces provide consumers and manufacturers with a myriad of choices for connecting their TV sets to cable systems, as well as to other devices and other program delivery systems. With four interfaces, consumers will be able to choose from simple, low-cost connections to high-end, multiple-interface models.

not a requirement.¹⁸ The availability of baseline cable-ready DTV receivers, by eliminating the need for most consumers to have a cable set-top box, will make DTV interoperability with cable far more cost-effective for consumers, and will minimize the signal encryption and copy protection issues.

B. DTV Labeling Should Be Readily Understood as to Functionality of DTV Receivers and the Degree of Their Compatibility With All the Various Features That Can Be Provided Over Digital Cable Systems.

CEA believes, as the Commission similarly found in the analog cable-compatibility proceeding, that simply limiting the applicability of the “cable ready” labeling standards to products that have varying advanced features based on cable service capabilities that extend beyond the delivery of video programming could lead to confusion for consumers. While CEA understands the cable industry’s desire to have television sets that can process as many cable services as possible, CEA believes that consumers will derive maximum value if they have the ability to choose among a variety of sets incorporating different features at a range of prices. In order to choose among the variety of products that will be available to them -- and that will work with some or all of the features of digital cable systems -- consumers need information that can be readily understood as to functionality of DTV receivers and the degree of their compatibility with all the various features that can be provided over digital cable systems.

CEA believes that there must be a baseline cable-ready receiver that will satisfy basic consumer needs for the receipt and viewing of video programming provided over cable systems. A fundamental element of this baseline definition should be the ability to interconnect and interoperate with cable systems’ POD-based modular security systems. Navigation devices of all

¹⁸ CEA notes that the baseline service description is for a direct connection to the cable system via the F-connector and is specified in EIA/CEA818.

sorts, including VCRs and set-top boxes, should be subject to the labeling requirement.¹⁹ This baseline labeling standard will provide a foundation upon which manufacturers can compete with advanced features, some of which would be strictly product-based and others that may rely on new cable system capabilities. Consumers will not be well-served if all sets labeled as “cable-ready” include expensive features that may never be used by a significant number of consumers. Given these considerations, CEA recommends the use of two labeling standards: (1) one that would function as “cable ready” has in the analog environment and that would connote a one-way download ability to view digital video programming; and (2) a second label that could be used to indicate that the equipment has additional capabilities, such as two-way interactivity. The Commission should not delay, however, in either recognizing a multi-industry agreement for labeling a baseline, cable-ready set, if such an agreement can be reached in the very near future, or, if an agreement cannot be reached, moving rapidly to set in place rules that parallel its current analog rules in order to fix a digital “cable-ready” definition.

IV. CEA SUPPORTS THE DEVELOPMENT OF ADEQUATE AND REASONABLE COPY PROTECTION STANDARDS.

CEA strongly maintains that the implementation of digital television must not be further delayed because of concerns relating to copy protection. Much of what will be available on DTV, including over-the-air broadcasts and basic cable services, should not – and with the Commission’s hoped-for intervention, if necessary, will not – be subject to any copy protection technical procedures. CEA is committed to working with other parties to ensure that copyrighted

¹⁹ In this regard, CEA notes that the integrated boxes currently being deployed by cable operators should be subject to the labeling rules, as should all navigation devices. Integrated set-top boxes that cannot connect to cable systems via a POD interface should not be labeled as “cable-ready.” The “cable-ready” label should only apply to navigation devices that meet portability requirements.

content, when transmitted in digital format, is adequately protected against unauthorized copying. While CEA agrees with the need to protect the integrity of copyrighted works, it strongly contends that it must be done without unduly burdening either consumers or equipment manufacturers.

Although free, over-the-air, broadcast digital television programming should not be affected by any technical limitations designed to effect copy protection, it is CEA's belief that the success of digital television in general will be directly linked to the ability of cable systems to deliver high definition digital programming. Much of this programming will originate from sources other than broadcasting. Cable operators will be subject to considerable pressure from content providers to employ copy protection procedures as a condition of distribution of a large number of digital programs. For this reason, copy protection issues, particularly those that have been inserted into the negotiations regarding the POD interface between cable services and consumer electronics equipment, must be resolved.

CEA and its members have worked diligently with the cable industry to define receiver standards that will support the delivery of digital programming by cable systems with adequate protection against cable theft. CEA strongly maintains, however, that cable industry technology licenses containing copy protection requirements must not be used to influence other features and functions of consumer equipment nor should they unnecessarily disadvantage licensees in their ability to provide products that meet consumers' expectations for display and home recording of video programming. Moreover, although CEA and its members have addressed the issue of copy protection through an attitude of accommodation and a willingness to negotiate, CEA is concerned that this good faith approach may not be reflected in the attitude of all parties to these deliberations. Therefore, CEA urges the Commission to use the full extent of its

authority over cable operators and broadcasters to ensure that mutually satisfactory agreements are reached that contain rational, consumer-friendly copy protection procedures (*i.e.*, encoding rules). Copyright law exists to protect content providers; these parties do not need to place undue burdens on consumers and equipment manufacturers to protect their rights.

Fundamentally, the Commission should adopt a pro-consumer attitude of preserving the so-called “Betamax rights” in the digital environment.²⁰ Reasonable and customary consumer home video recording practices should be preserved. No matter what copy protection system or systems are eventually adopted by the various industries, it is essential that the rights of consumers be protected.

To reach these goals, it may be that the “carrot” of successful deployment of digital cable service is not sufficient, because of the cable industry’s continued market power in the delivery of multichannel video programming. The Commission must also be willing to deploy the “stick” of vigorous enforcement of its navigation devices rules. Specifically, the Commission should permit only reasonable, mutually acceptable copy protection conditions to be included in cable POD technology licenses, conditions that would not unreasonably curtail consumers’ ability to display and record video programming. CEA believes that unreasonable copy protection requirements, which have no relation to conditional access or protection against cable theft, violate Section 76.1204(c) of the Commission’s Rules.²¹ Action by the Commission to set forth

²⁰ *Sony Corporation of America v. Universal City Studios*, 464 U.S. 417 (1986) (also known as the “Betamax case”).

²¹ Section 76.1204(c) states:

No multichannel video programming distributor shall by contract, agreement, patent, intellectual property right or otherwise preclude the addition of features or functions to the equipment made available pursuant to this section that are not designed, intended or function to defeat

legal parameters that appropriately limit the cable industry's legal ability to require copy protection in consumer electronics equipment would be conducive to voluntary agreements that will foster protection of copyrighted material under mutually satisfactory terms and conditions.

CEA notes that there is a fundamental difference between conditional access and copy protection. The first controls the general availability to the subscriber to desired programming without defining any particular allowed use. The second details how, and perhaps when, the subscriber can use the programming. In a digital environment, there is no "fool-proof" technical solution that will prevent unauthorized copying of copyrighted material, although this potential threat to content providers should not be exaggerated. The overwhelming majority of consumers are not engaged in the illegal reproduction of copyrighted programming for commercial distribution. Effective law enforcement is the appropriate remedy to deal with the relative handful individuals who engage in illegal piracy. It would be unfair, unwise, and ultimately self-defeating if the dawn of widely-disseminated digital programming were to be clouded by copy protection requirements that attempt to roll back consumers' "Betamax" rights and that are falsely framed as conditional access measures.

CEA and its members have worked cooperatively with the cable industry on copy protection solutions that will address the legitimate concerns of cable operators and content providers. One solution, referred to as the "5C" proposal, has been put forward by Hitachi, Intel, Matsushita, Sony, and Toshiba. Another called the "Extended Conditional Access (XCA)" has been proposed by Thomson and Zenith. Manufacturers and content providers may have

conditional access controls of such devices or to provide unauthorized access to service.

47 C.F.R. § 76.1204(c).

additional choices for copy protection as manufacturers continue to develop innovative technologies to protect the security of cable programming over a wide array of digital interfaces. CEA maintains, however, that the issues of conditional access and copy protection must not be confused, and that the consumer electronics industry should not be forced to bear the burden of policing copy protection safeguards, particularly safeguards that intrude upon consumers' customary practices regarding home video recording.

CEA remains sensitive to the interests of content providers in seeking to ensure that digital information passed over the cable interface is not vulnerable to illicit copying. In recognition of the concerns of the Motion Picture Association, the cable, broadcast, and consumer electronics industries continue to work together to ensure protection of the digital link over which this copyrighted material is sent. As already noted, several companies have developed "5C" Digital Transmission Content Protection ("DTCP") technology, which appears to address many of the concerns of cable operators and content providers regarding system integrity and copy protection. The Commission, however, should make no rule mandating the use of "5C" technology, but instead should act in the manner described above to facilitate a voluntary, multi-industry agreement that could incorporate use of this kind of technology as one element.

V. BROADCASTERS' DIGITAL SIGNALS AND SERVICES, INCLUDING ELECTRONIC PROGRAM GUIDES, SHOULD BE ACCESSIBLE TO ALL CABLE CONSUMERS.

In the *NPRM*, the Commission seeks comment on the range of digital services that consumers will be able to access with a digital television receiver.²² CEA believes that, in order

²² *NPRM* at ¶ 16.

to insure that millions of cable-subscribing households can access digital television and its benefits, the Commission must promulgate consumer-friendly regulations that require the digital signal delivered by cable to consumers be the entire signal, with all of its original attributes, including all necessary EPG data, regardless of the terms of the cable carriage.²³ It is also essential that operators retransmit broadcast DTV signals in their original format and without degradation of any kind. Consumers with new digital receivers have paid for the privilege of viewing the digital signals at the highest quality their receivers provide, and must not be prevented from doing so by their cable provider.

Digital signals retransmitted on cable systems must be delivered to consumers without degradation or deletions. It would be grossly unfair to American cable consumers to permit cable operators to strip broadcast digital signals so that the signals have less than their original picture resolution or audio quality, or lack user data or associated PSIP as defined by ATSC standard A/65 information. In addition, each channel which contains cable-sources non-scrambled material should also follow the ATSC A/65 standard. Such data, if left intact as broadcast or supplied in cable-sourced programming, works with the consumers' equipment to provide services such as emergency broadcast alerts, closed captions for the deaf, electronic program guides, and automatic disablement of programs not recommended for children (*i.e.*, the "V-chip"). There simply would be no public policy benefit to permitting cable systems unilaterally to disable equipment functionalities, for which consumers pay when they purchase their equipment, and the data included in the unaltered free, over-the-air broadcast signal.

²³ The consumer electronics industry is fully committed to products that will support all video formats with consumer-friendly navigation devices based on a free EPG, whether they are connected to antennas or directly connected to cable systems. Operator-supplied proprietary set-top boxes that do not support all video formats and cannot provide an EPG without a cable TV connection should carry a warning label to that effect.

A. Cable Operators Should Provide All Authorized Signals “In the Clear.”

Cable operators should provide all authorized signals “in the clear.” As the Commission required cable operators to do in the analog context, the Commission should likewise require cable operators to provide, in the digital context, basic services “in the clear.”²⁴ In the NPRM, the Commission asks whether it should permit scrambling of nonbroadcast digital channels on the basic service tier, either by general rule or by waiver.²⁵ CEA has received indications from certain large MSOs that they plan to scramble all channels, including the broadcast signal on all systems. CEA notes that general scrambling would require all sets to have operator supplied descrambling equipment either in the form of a set-top box or a POD module. Television sets without a POD interface would be forced to somehow connect to a set-top box or would not be viable to receive even broadcast programming. This would be a step backwards from the manner in which consumers receive cable services in the analog context. CEA therefore urges the Commission to ensure that programming that is available today that is unscrambled on the cable basic services tier should, likewise, be available in the digital context, and reserving the ability of cable operators to request a waiver of such a requirement, as is permitted in the analog context. This approach would serve well all those involved – *i.e.*, the cable subscribers, operators, and receiver manufacturers.

²⁴ With “in the clear” technologies, all of the signals a subscriber purchases are available simultaneously, so that multiple signals may be tuned, for viewing or recording, at the same time. By “authorized signals,” CEA means over-the-air broadcast and basic cable programming channels that are generally not subject to scrambling in the analog cable environment.

²⁵ See *NPRM* at ¶ 17.

B. EPGs Should Be Accessible to All Consumers.

In addition to high resolution pictures and CD-quality sound, DTV offers consumers an array of new programming and features. However, to be readily accessible to consumers, these new features and programming must be organized and presented in a transparent and consumer-friendly manner. EPGs organize and display information concerning video programs, including over-the-air broadcasts and cable programming. The PSIP datastream contains the Event Information Tables (“EITs”) that provide the EPG information, such as program title, program description, start time, end time, closed caption index, and program content rating that may be displayed in an on-screen guide for the consumer’s convenience. However, the need for PSIP information goes well beyond the display of programming lists to the very display of the programming itself. The PSIP datastream includes the Virtual Channel Table (“VCT”) information that enables the television set or navigation device to locate the program on the system and display it on the set. This information is essential to program tuning in the “virtual channel” environment of a digital cable system.

CEA believes that EPGs will be playing an even more critical role as we convert to DTV. EPGs will be critical to navigating through a multitude of video channels and potentially many digital data options. The EPG data, as well as critical data related to closed captions and parental guide information, are transmitted in the transport stream of the broadcaster’s digital signal as specified by the ATSC’s PSIP practice. This PSIP data protocol will not work correctly unless the integrity of the PSIP data is maintained when the broadcast signal is retransmitted by the cable operator. Alterations that affect the integrity of the PSIP data will also affect any value-added program guide provided by the receiver manufacturer. Any such alterations would cause unnecessary expense and confusion for consumers already owning receivers designed to work with data broadcast consistent with the ATSC PSIP standard.

Ensuring consumer access to competing EPGs is consistent with Congressional and Commission policy objectives. For example, in Section 624A of the Communications Act, which was enacted as part of the comprehensive Cable Act of 1992, Congress required the Commission to resolve incompatibilities between cable systems and TVs and VCRs.²⁶ The statute notes that premium equipment features and functions often are disabled or inhibited by cable, and that this incompatibility could inhibit manufacture of TVs and VCRs with innovative features and functions. The purpose of requiring the Commission to assure compatibility between these devices and cable systems was to enable subscribers to enjoy the full benefit of both programming on cable systems and functions built into consumer electronics equipment.

Further, the Commission has determined that EPGs fall within the scope of Section 629 of the Communications Act, which requires the Commission to assure the commercial availability of navigation devices not affiliated with any multichannel video programming distributor.²⁷ The Commission has stated its commitment to “encourage the development of the market for the provision of EPGs as part of the broader goal of promoting consumer choice.”²⁸ Some cable operators contend that information describing EPG datastreams is considered to be proprietary. Also, there are multiple, different, and incompatible systems in current use by cable operators. However, unless information concerning these datastreams is made available, no competing vendor can build a competitive navigation device that will satisfy the basic consumer

²⁶ See 47 U.S.C. § 544a.

²⁷ See *In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996 – Commercial Availability of Navigation Devices*, CS Docket No. 98-120, Report and Order, 13 FCC Rcd 14775, at ¶ 116 (1998).

²⁸ *Id.*

expectation of displaying all of the programming in the cable services for which the consumer has paid.

Some EPGs included in DTV receivers will be competing with EPGs owned and operated by cable systems. Where consumers have purchased equipment with EPG capability and broadcasters have included the EPG information within their signals, cable operators retransmitting the broadcast signals should be prohibited from rendering these consumer equipment functions inoperable by stripping the information from the broadcast signal. To permit degradation of the broadcast signal in this fashion would sanction a practice that would place the cable operator with its own competitive EPG in a position to delete its competitor's service and restrict the cable system's customers to the single EPG associated with, or provided by, the cable operator itself.²⁹

Additionally, the Commission must ensure that cable operators are not permitted to restrict or impair access to certain Internet sites in order to protect their own EPGs. Such action could affect competition in the navigation devices market. Consumer electronics manufacturers may very well develop new technologies that may depend on Internet connectivity. In this regard, manufacturers may choose to provide EPGs using access to an Internet site. CEA is concerned, however, that if cable operators are allowed to block or disable access to such an EPG download site, the navigation device provided by the operator could have a competitive advantage over devices available from sources other than cable operators.

²⁹ See Gemstar Petition for Special Relief (filed March 16, 2000) in CSR 5528-Z.

VI. CONCLUSION

As stated in the foregoing, CEA is hopeful that an agreement on the remaining issues can be reached with NCTA. If such an agreement cannot be reached quickly, CEA would support Commission efforts to facilitate negotiated rulemaking, consistent with the views submitted by CEA herein.

Respectfully submitted,

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